

## CLAIMS

1. An injector for injecting fuel under high pressure into a combustion chamber of an internal combustion engine, comprising an injector housing; an inlet <sup>22</sup>connectable with a high pressure collecting chamber; a valve <sup>3</sup>body for controlling said inlet from the high pressure collecting chamber and movably received in said housing; a nozzle <sup>36</sup>chamber provided in said housing; a nozzle <sup>25</sup>needle which due to pressure changes in said nozzle chamber can open or close; a sealing <sup>24</sup>spring which biases said nozzle needle, said nozzle needle being provided with pressure <sup>31 & 40</sup>stages which are loadable by a hydraulic <sup>28</sup>spring and a pressure acting in said inlet from the high pressure collecting chamber.

2. An injector as defined in claim 1; and further comprising means forming a high pressure side; a ring <sup>34</sup>chamber surrounding said nozzle needle; and a connection <sup>33</sup>formed in said housing between said high pressure side and said ring chamber.

3. An injector as defined in claim <sup>2</sup>1, wherein said connection is formed as a circumferential ring-shaped groove provided in said housing.

4. An injector as defined in claim 2, wherein said nozzle needle has a ring-shaped <sup>35</sup> surface which is loaded with high pressure through said connection between said high pressure side and said ring chamber.

5. An injector as defined in claim 1; and further comprising a hydraulic spring chamber, said nozzle needle having a transverse surface <sup>31</sup> arranged so that above said transverse surface of said nozzle needle control volumes which are contained in said hydraulic spring <sup>23</sup> chamber act as a force directed opposite to an opening force of said nozzle needle.

26 6. An injector as defined in claim 1; and further comprising a refilling valve associated with said hydraulic spring chamber.

7. An injector as defined in claim 1; and further comprising a control <sup>29</sup>piston which is arranged in said housing parallel to said nozzle needle, said <sup>LA?</sup>hydraulic piston having an end surface which is loaded by a control volume of a hydraulic spring chamber <sup>D.I.</sup> and through a connection with high pressure.

8. An injector as defined in claim 1; and further comprising a valve body which is separate from said nozzle needle and formed as a slider which releases a nozzle inlet to a waste oil side.

9. An injector as defined in claim 1; and further comprising means forming restoring forces which counteract an opening force acting on said nozzle needle when high pressure acts on <sup>? suggestion</sup>said pressure stage, such that said restoring forces are produced by a pressure loading of a cross-sectional surface through a hydraulic spring chamber and through pressure <sup>28 DT</sup>

